

**In the Claims:**

Please amend claims 25-57 as follows and add claims 58-62:

25. (Currently amended) A method **for accessing services on a controlled device** comprising:

creating a definition of a controlled device using an XML-based language, **wherein the definition includes a service control protocol definition**; and  
storing the definition on at least one computer-readable medium.

26. (Previously presented) A method as recited in claim 25, wherein the storing comprises storing the definition on a computer-readable medium resident at the controlled device.

27. (Previously presented) A method as recited in claim 25, wherein the storing comprises storing at least part of the definition on a computer-readable medium located remotely from the controlled device.

28. (Currently amended) A method as recited in claim 25, further comprising generating a control message from the controlled device, the controlled message being generated in accordance with the **service control protocol** definition.

29. (Previously presented) A method as recited in claim 25, wherein the creating comprises:

creating a device portion of the definition that defines attributes of the controlled device;  
and

creating a service portion of the definition that defines one or more services exposed by the device.

30. (Previously presented) A method as recited in claim 29, wherein the storing comprises:

storing the device portion on a first computer-readable medium resident at the controlled device; and

storing the service portion on a second computer-readable medium located remotely from the controlled device, but accessible over a network.

31. (Previously presented) A method as recited in claim 29, further comprising making both the device portion and the service portion available at runtime over a network.

32. (Currently amended) A method of dynamically self-bootstrapping a computing device onto a peer network, comprising:

storing a definition of the computing device, the definition **including a set of instructions defining a protocol of network data messages to define services through which the network data messages are communicated;** ~~being written using an XML-based language;~~  
and

making the definition available to other computing devices on the network.

33. (Currently amended) One or more computer-readable media having stored thereon a description of a device that is configured to dynamically bootstrap itself onto a peer network, the description comprising:

a first set of XML-based code strings that define attributes of the device; and

a second set of XML-based code strings that define one or more services exposed by the device, **the second set of XML-based code strings including data to create service specific data messages.**

34. (Previously presented) A computer-readable medium as recited in claim 33, wherein the first set of XML-based code strings contain a reference to the second set of XML-based code strings.

35. (Canceled)

36. (Previously presented) A computer-readable medium as recited in claim 33, wherein the first set of XML-based code strings is stored on a first computer-readable medium and the second set of XML-based code strings are stored on a second computer-readable medium separate from the first computer-readable medium.

37. (Previously presented) A computer-readable medium as recited in claim 33, wherein the second set of XML-based code strings comprises at least one or more universal resource locators to one or more locations that host one or more descriptions of the one or more services.

38. (Currently amended) A data structure stored on one or more computer-readable media that is instantiated in accordance with a schema, the schema comprising:

a device description written in an XML-based language to describe a controlled device;  
and

a service description written in an XML-based language to describe at least one service supported by the controlled device, the service description describing how to access the at least one service supported by the controlled device.

39. (Previously presented) A computer-readable medium as recited in claim 38, wherein the device description is stored at a first location and the service description is stored at a second location remote from the first location, but accessible via a network.

40. (Currently amended) A computer-readable medium as recited in claim ~~33~~ 38, wherein the device description contains a reference to the service description.

41. (Currently amended) A computer-readable medium as recited in claim ~~33~~ 38, wherein the device description contains at least one other device description nested therein.

42. (Previously presented) A dynamically self-bootstrapping computing device comprising:

a description, written in an XML-based language, that describes how to remotely operate the computing device; and

description means, responsive to a description request received by the computing device on a network, for sending a description message based on the description that defines interaction via data messaging with the computing device over the network.

43. (Previously presented) A dynamically self-bootstrapping computing device as recited in claim 42, wherein the description comprises a device description to describe attributes of the computing device and a service description to describe one or more services exposed by the computing device.

44. (Previously presented) A dynamically self-bootstrapping computing device as recited in claim 43, wherein the device description and the service description are located remotely from one another and separated by a network.

45. (Previously presented) A dynamically self-bootstrapping computing device as recited in claim 42, wherein the device description and the service description are made available at runtime over the network.

46. (Previously presented) A dynamically self-bootstrapping computing device as recited in claim 42, wherein the description comprises multiple descriptions that describe how to remotely operating multiple computing devices logically contained within the computing device.

47. (Previously presented) A dynamically self-bootstrapping computing device as recited in claim 42, wherein the description is a first description, further comprising a second description, written in an XML-based language, that describes how to remotely operate another computing device, the second description being nested within the first description.

48. (Previously presented) A computing device comprising:

a memory;  
self-describing data stored in the memory and written in an XML-based language, the  
self-describing data describing how to operate the computing device; and  
a processor coupled to the memory to submit the self-describing data to remote entity on  
a network.

49. (Previously presented) A computing device as recited in claim 48, wherein the  
self-describing data comprises first data to describe attributes of the computing device and a  
second data to describe one or more services exposed by the computing device.

50. (Previously presented) A computing device as recited in claim 48, wherein the  
self-describing data comprises device data to describe attributes of the computing device and one  
or more universal resource locators to one or more services exposed by the computing device.

51. (Currently amended) An ~~architecture for an~~ ad hoc peer network, ~~the architecture~~  
comprising:

multiple controlled devices configured to dynamically self-bootstrap onto the network,  
individual controlled devices comprising a device description to describe attributes of the  
computing device and a service description to describe one or more services exposed by the  
computing device, the device and service descriptions defining a messaging protocol, the  
device and service descriptions being written in an XML-based language; and

one or more user control points to initiate communication with the controlled devices  
over the network.

52. (Currently amended) An ~~architecture~~ ad hoc peer network as recited in claim 51,  
wherein the device description and the service description for an associated controlled device are  
both stored on the associated controlled device.

53. (Currently amended) An ~~architecture~~ ad hoc peer network as recited in claim 51,  
wherein the device description and the service description for an associated controlled device are  
stored separately from one another so that the device description is stored on the associated

controlled device and the service description is stored remotely from the associated controlled device, but is accessible via the network.

54. (Currently amended) An apparatus comprising:  
means for storing a definition of a controlled device, **the definition containing a device description to describe attributes of the controlled device and a service description to describe one or more services exposed by the controlled device, the definition being written using an XML-based language;** and  
means for making the definition available to other computing devices on the network.

55. (New) An apparatus as recited in claim 54, wherein the storing means stores multiple definitions of multiple controlled devices.

56. **(Canceled)**

57. (New) An apparatus as recited in claim 54, wherein the definition contains multiple device descriptions, each describing a different set of attributes of the controlled device.

58. (New) The method of claim 25 wherein the service control protocol definition comprises a definition of a network messages protocol through which methods, queries, and event notifications are invoked on the device.

59. (New) The method of claim 25 wherein the service control protocol definition is written according to a contract definition language.

60. (New) The method of claim 59 wherein the contract definition language is based on an XML schema.

61. (New) The data structure of claim 38 wherein the service description comprises at least in part service access protocol description.

62. (New) The data structure of claim 61 wherein the service description is automatically configurable.